

212260-53-2, Iron lithium hydroxide oxide ($\text{FeLi}_{0.6}(\text{OH})\text{O}$) 212260-54-3, Iron lithium hydroxide oxide ($\text{FeLi}_{0.7}(\text{OH})\text{O}$) **212260-56-5**, Iron lithium hydroxide oxide ($\text{FeLi}_{0.8}(\text{OH})\text{O}$)

RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(discharge-charge characteristics and performance of Li/FeOOH-aniline battery with PAN-based polymer electrolyte)

IT 7439-93-2, Lithium, reactions

RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)

(discharge-charge characteristics and performance of Li/FeOOH-aniline battery with PAN-based polymer electrolyte)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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DOCUMENT NUMBER: 129:205173

TITLE: Discharge-charge characteristics and performance of
Li/FeOOH(an) battery with PAN-based polymer
electrolyte

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AB The discharge-charge characteristics and performance of a Li/FeOOH(an)
solid polymer battery are investigated. The cell uses a cathode of
amorphous FeOOH with aniline derivs. (FeOOH(an)) and a
polyacrylonitrile-based solid polymer electrolyte. The ionic conductivity of the
electrolyte sample used for electrochem. measurements is 1.6×10^{-3}
 $\Omega\text{-cm}^{-1}$ at room temperature. Its anodic stability is above 4.5 V. The
diffusion coefficient of Li^+ ions into the cathode is found to be
 $2.97 \times 10^{-11} \text{ cm}^2 \text{ s}^{-1}$ by a.c. impedance spectroscopy. Variations of
impedance parameters and the diffusion coefficient are investigated during the
first discharge-charge. From the results of these measurements, it is
concluded that the structure of FeOOH(an) is deformed by Li^+ ion
insertion/extraction. The electrochem. redox reaction of FeOOH(an) is
investigated by cyclic voltammetry. In the potential range 2.0 to
approx. 4.0 V, the first discharge-charge is irreversible. Thereafter,
reversible cycling processes take place. The initial discharge capacity
is approx. 130 mA h g^{-1} at a c.d. of 0.1 mA cm^{-2} .

IT Diffusion

(Li; discharge-charge characteristics and performance of
Li/FeOOH-aniline battery with PAN-based polymer electrolyte)

IT Intercalation

(electrochem.; discharge-charge characteristics and performance of
Li/FeOOH-aniline battery with PAN-based polymer electrolyte)

IT Secondary batteries

(lithium; discharge-charge characteristics and performance of
Li/FeOOH-aniline battery with PAN-based polymer electrolyte)

IT 62-53-3, Aniline, uses 20344-49-4, Iron hydroxide oxide feooh
25014-41-9, Pan

RL: DEV (Device component use); USES (Uses)

(discharge-charge characteristics and performance of Li/FeOOH-aniline
battery with PAN-based polymer electrolyte)

IT 212260-46-3, Iron lithium hydroxide oxide ($\text{FeLi}_{0.1}(\text{OH})\text{O}$) 212260-47-4,
Iron lithium hydroxide oxide ($\text{FeLi}_{0.2}(\text{OH})\text{O}$) 212260-48-5, Iron lithium
hydroxide oxide ($\text{FeLi}_{0.3}(\text{OH})\text{O}$) 212260-49-6, Iron lithium hydroxide oxide
($\text{FeLi}_{0.4}(\text{OH})\text{O}$) 212260-50-9, Iron lithium hydroxide oxide ($\text{FeLi}_{0.5}(\text{OH})\text{O}$)
212260-52-1, Iron lithium hydroxide oxide ($\text{FeLi}_{0.9}(\text{OH})\text{O}$)